AGENDA

DOE/NETL's

Mercury Control Technology R&D Program Review

Pittsburgh Hilton Hotel

July 12-14, 2005

TUESDAY, July 12

7:00 am Registration and Continental Breakfast

Program Review Overview

8:00 am **Introduction**
Charles E. Miller, Project Manager, Environmental Projects Division
U.S. Department of Energy, National Energy Technology Laboratory

8:05 am **Welcome**
Joseph Strakey (tentative), Associate Director, Office of Coal & Power R&D
U.S. Department of Energy, National Energy Technology Laboratory

8:20 am **Overview of DOE/NETL's Mercury R&D Program**
Thomas J. Feeley, III, Product Manager, Innovations for Existing Plants
U.S. Department of Energy, National Energy Technology Laboratory

8:35 am **Reduction of Mercury Emissions from Coal-Fired Electricity Utility Boilers**
Ravi Srivastava, Project Manager, Air Pollution and Control Division,
U.S. Environmental Protection Agency, Office of Research and Development

9:00 am **EPRI Focus in the Home Stretch: Mercury Control Technology Priorities for the Industry to Meet the Regulations** - *George Offen,* Tech. Exec., Emissions/Combustion Product Use, Electric Power Research Institute

Stack Plume Chemistry

9:20 am **In-Plume Redox of Mercury: Lab, Field, and Mechanistic Studies**
Leonard Levin, Electric Power Research Institute

9:50 am **Break**

Sorbent Injection

10:30 am **Long-Term Operation of a COHPAC System for Removing Mercury from Coal-Fired Flue Gas** - J*ean Bustard,* ADA Environmental Solutions, LLC

11:00 am **Mercury Control Technologies for Electric Utilities Burning Lignite Coal, Phase II**
John Pavlish, University of North Dakota Energy & Environmental Research Center

11:30 am **Evaluation of Sorbent Injection for Mercury Control**
Sharon Sjostrom, ADA Environmental Solutions

12:00 pm **Group Lunch**

1:00 pm **Sorbent Injection for Small ESP Mercury Control in Low-Sulfur Bituminous Coal Flue Gas** - *Carl Richardson,* URS Group, Inc.

1:30 pm **Demonstration of Amended Silicates for Mercury Control**
Jim Butz, Amended Silicates, LLC

2:00 pm **Advanced Utility Mercury Sorbent Field Testing Program**
Sid Nelson, Sorbent Technologies Corporation

2:30 pm **Break**

3:00 pm **Field Demonstration of Enhanced Sorbent Injection for Mercury Control**
Srivats Srinivasachar, Alstom Power

3:30 pm **Enhancing Carbon Reactivity for Mercury Control in Coal-Fired Power Plants**
Michael J. Holmes, University of North Dakota Energy & Environmental Research Center

4:00 p.m. **Panel Discussion - Halogenated Sorbents for Mercury Control**
(30 minutes presentation / 30 minutes discussion)

5:30-7:00 pm **POSTER SESSION** and Light Refreshments

Poster Presenters:

Development of Carbon Traps for Hg Monitoring; EPRI's QuickSEM{tm} Experience - *Chuck Dene,* Electric Power Research Institute

Geographic Variation and Emission Potential of Mercury, Sulfur, and Chlorine in U.S. Coal - *Jeff Quick,* Utah Geological Survey

Control of Mercury Emission from Power Plants by the Oxidation of Mercury Gas: Gas Phase and Solid Induced Reaction Pathways
S.G. "Ted" Chang, Lawrence Berkeley National Laboratory

Investigation of Mercury and Carbon-Based Sorbent Reaction Mechanisms
Charlene Crocker, University of North Dakota Environmental & Energy Research Center

Mercury Control with Calcium-Based Sorbents and Oxidizing Agents
Tom Gale, Southern Research Institute

Mercury Chemistry and Sorbents for Capture
C. David Livengood and Marshall H. Mendelsohn, Argonne National Laboratory

Sorption Mechanisms for Mercury Capture in Warm Post-Gasification Gas Clean-Up Systems - *Jost Wendt,* University of Arizona

Bench Scale Kinetics of Mercury Reactions in FGD Liquors
Gary Blythe, URS Group, Inc.

Monitoring and Modeling of Mercury Transport and Deposition in the Ohio River Valley - *Kevin Crist,* Ohio University

Mercury Risk Assessment
Terry Sullivan, Brookhaven National Laboratory

WEDNESDAY, July 13

7:00 am Registration and Continental Breakfast

Combustion Modification

8:00 am **Mercury Control Using Combustion Staging**
Vitali Lissianski, GE Energy & Environmental Research Corporation

8:30 am **Impact of Modified Boiler Control Settings on Mercury Emissions**
Carlos E. Romero, Lehigh University

Mercury Oxidation and Removal with SCR/FGD Systems

9:00 am **Oxidation of Mercury Across SCR Catalysts in Coal-Fired Power Plants Burning Low Rank Fuels**
Constance Senior, Reaction Engineering International, Inc.

9:30 am **Large-Scale Mercury Control Technology Testing for Lignite-Fired Utilities/ Oxidation Systems for Wet FGD**
Steven A. Benson, University of North Dakota Energy & Environmental Center

10:00 am **Break**

10:30 am **Pilot Testing of Mercury Oxidation Catalysts for Upstream of Wet FGD Systems**
Gary Blythe, URS Group, Inc.

11:00 am **Field Testing of a Wet FGD Additive for Enhanced Mercury Control**
Gary Blythe, URS Group, Inc.

11:30 am **Open**

12:00 pm **Group Lunch**

Other Mercury Control Technology and Issues

1:00 pm **TOXECON Retrofit for Mercury and Multi-Pollutant Control**
Richard Johnson, We Energies

1:30 pm **Technologies for Reducing Mercury, SO_3, and NO_X Emissions for Eastern Bituminous Coal Power Plants** - *Dick Winschel,* CONSOL, Inc.

2:00 pm **The PCO Process for Removal of Mercury from Flue Gas**
Evan J. Granite, U.S. Department of Energy, National Energy Technology Laboratory

2:30 pm **Break**

3:00 pm **The Thief Process for Mercury Removal from Flue Gas**
Evan J. Granite, U.S. Department of Energy, National Energy Technology Laboratory

3:30 pm **Computational Approaches to the Development of Advanced Mercury Control Technologies** - *Jens I. Madsen,* Fluent, Inc.

4:00 pm **Evaluation of MerCAP for Power Plant Mercury Control**
Carl Richardson, URS Group, Inc.

THURSDAY, July 14

7:00 am Registration and Continental Breakfast

Byproduct Characterization/Management

8:00 am **Characterization of Coal Combustion By-Products for the Re-Evolution of Mercury into Ecosystems** - *Jeff Withum,* CONSOL, Inc.

8:30 am **Mercury and Air Toxic Element Impacts of CCB Disposal and Utilization**
Debra Pflughoeft-Hassett, University of North Dakota Energy & Environmental Center

9:00 am **Speciation and Attenuation of Arsenic and Selenium, and Fate of Mercury in Coal Combustion By-Products** - *Ken Ladwig,* EPRI

9:30 am **Break**

10:00 am **Fate of Mercury in Synthetic Gypsum Used for Wallboard Production**
Jessica Marshall, USG Corporation

10:30 am **NETL In-House Characterization of Mercury in Coal Combustion By-Products**
*Karl Schroeder***,** U.S. Department of Energy, National Energy Technology Laboratory

11:00 am **Analysis of Coal Combustion By-Products from DOE Mercury Field Testing Projects** - *not yet awarded*

11:30 am **Wrap-Up**
Lynn Brickett, U.S. Department of Energy, National Energy Technology Laboratory

12:00 pm **Adjourn**